

Citywide Deployment of Community Broadband

Fast and Free

@brewster_kahle



Internet Archive: Non-Profit Library





The background of the slide is a photograph of a concert. The stage is illuminated with bright blue spotlights, creating a hazy, atmospheric effect. In the foreground, the silhouettes of a large crowd are visible, with many hands raised in the air, suggesting a high-energy performance. The overall color palette is dominated by deep blues and bright whites from the stage lights.

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DEBATE PODIUM WATCH
University of Miami, Coral Gables, Florida

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The Japanese are polite to the last degree. In greeting or bidding *Shinawa* i.e. Good-bye, they generally bow their head till it reaches the waist, but in the street they simply make a low bow with their hands on their hips. So much importance is attached to politeness, that lessons in etiquette are in the curriculum of common schools, especially for girls.



With a scroll of paper in one hand and a writing brush in the other, the young lady is engaged in writing a letter. The Japanese do not always sit at desks when they write; it is considered a proof of expert penmanship to be able to write off in the posture they take assumes. The little square frame, covered with paper, is that of her's to be used as a support. It is, however, the Japanese of long ago who is shown here, for the modern Japanese woman would not be so modest as to write in such a posture.

"It *is* a long tail, certainly," said Alice, looking down with wonder at the Mouse's tail; "But why do you call it sad?" And she kept on puzzling about it while the Mouse was speaking.

a mouse, That
 he met
 in the
 house,
 'Let us
 both go
 to law :
 I will
prosecute
you. —
Come, I'll
 take no
 denial ;
 We must
 have a
 trial :
 For
 really
 this
 morning
 I've
 nothing
 to do.'

 Said the
 mouse to
 the cur,
 'Such a
 trial,
 dear sir,
 with no
 jury on
 Jury's
 would be
 wasting
 our breath :
 I'll be
 judge,
 myself,
 and
 conduct
 the whole
 case —
 and
 condemn
 you
 to —'

sh brown. The males have the space between these blotches milky white. In old individuals the abdomen has a strong whitish bloom. Other familiar



and well marked species of *Libellula* are *L. basalis*, with blackish brown body and with the basal third to half of the wings dark brown or black and the rest of the wing clear, or in the old males chalky white out as far as the



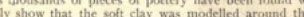
pterostigma, and in the females with brownish apices; *L. quadrimaculata*, with olive or yellowish body marked with black, front wings with more

800,000

3 000 000

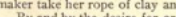
127), is a common large dragon-fly, but one hard to capture because of its fine flight. The wings show a basal patch, often nearly wanting on the front pair, a patch at the nodus, and a black apex. It likes "ponds or slug-

Professor Holmes says: "The clay vessel is an intruder, and usurps the place and appropriates the dress of its predecessor in the series. The forms illustrated in Figs. 8 and 9 are clay forms, common with the West-Indians, and undoubtedly taken from basketry. The figures of the natives and carrying baskets, show



within some basket forms which gave the shape of the vessel. In all the museums these specimens of pottery may be found. It will be observed in studying them that they bear far more impressions of basketry and other textile arts than of natural objects, such as gourds, shells, etc. It is also observable that every basketry stitch or pattern known to the aborigines is found in these pottery impressions. Hence the natural inferences that basketry antedates pottery, and that the art of basket-making was in an advanced stage whilst pottery was still in its infancy.

How fascinating the work of the antiquarian and archaeologist. To pick up even the fragments of the pottery of a long past age, brush off the accumulated dirt and read thereupon the relation its manu-



By and by the desire for ornamentation of pottery arose, and from this sprang the discovery of the fact that, while the clay was plastic, the exterior of the vessel could be smoothed with a spatula of bone or gourd, no matter what its size, if supported at the bottom in a basket or other mold so that it could be shifted or turned about without direct handling. See Fig. 7.

To smooth such a vessel inside and out required that it have a wide mouth, but, by and by, the potter determined that the mouth must be contracted as much water was spilled in carrying the full olla from the spring or river to the house. She still used the basket as a base for her pottery as shown in Fig. 12, and to this desire for a small-mouthed olla Cushing claims we owe the beautiful shape of Fig. 13.



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400,000

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1,000,000

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Understanding 9/11

A Television News Archive

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The Collection

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The events of September 11th, 2001 affected the entire world.

The 9/11 Television News Archive is a library of news coverage of the events of 9/11/2001 and their aftermath as presented by U.S. and international broadcasters. A resource for scholars, journalists, and the public, it presents one week of news broadcasts for study, research and analysis.

Television is our pre-eminent medium of information, entertainment and persuasion, but until now it has not been a medium of record. This Archive attempts to address this gap by making TV news coverage of this critical week in September 2001 available to those studying these events and their treatment in the media.

[Explore](#) 3,000 hours of international TV News from 20 channels over 7 days, and select analysis by scholars.

LEARNING FROM RECORDED MEMORY: 9/11 TV News Archive Conference

Held on August 24, 2011 at New York University's Department of Cinema Studies, this conference highlighted work by scholars using television news materials to help us understand how TV news presented the events of 9/11/2001 and the international response.

After brief [welcoming remarks by Howard Besser](#), Director of New York University's Moving Image Archiving & Preservation Program and Richard Allen, Department of Cinema Studies, Tisch School of the Arts, New York University, 10 speakers presented the following short talks and [ensuing discussion](#), which you can [watch on the Internet Archive](#).

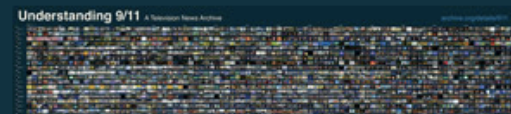
- [Introducing the 9/11 TV News Archive](#)

Brewster Kahle, Internet Archive

Brewster Kahle, Digital Librarian at Internet Archive, introduces the 9/11 TV News Archive and reviews the case for online scholarly and research access to



Watch a [video summary of key events](#).



LEARNING FROM RECORDED MEMORY: 9/11 TV News Archive Conference Wednesday, August 24, 4:00-6:00 pm.

Co-sponsored by Internet Archive and New York University's Moving Image Archiving and Preservation Program, [Tisch School of the Arts](#).



NEW YORK UNIVERSITY

[illegible]

Internet Archive Community Broadband

- Started in 1997 with Community Wireless
- Open high-speed connectivity
- Inexpensive, residents own the network
- Guiding principle: **Fast and Free**

Improving: Equipment Efficiency

Year	Standard	Signal Rate	TCP Throughput	Bits/Hertz	Price per repeater node
1996	proprietary	1 Mbps	0.5 Mbps	0.025	\$1000
1997	802.11	2 Mbps	1 Mbps	0.05	
1999	802.11b	11 Mbps	5.5 Mbps	0.275	\$750
2003	802.11a/g	54 Mbps	22 Mbps	1.1	
2009	802.11n	150 Mbps	75 Mbps	3.75	\$200

(Internet Archive)

Declining: US Broadband Position

Year	Rank in World
2002	6
2006	14
2010	23

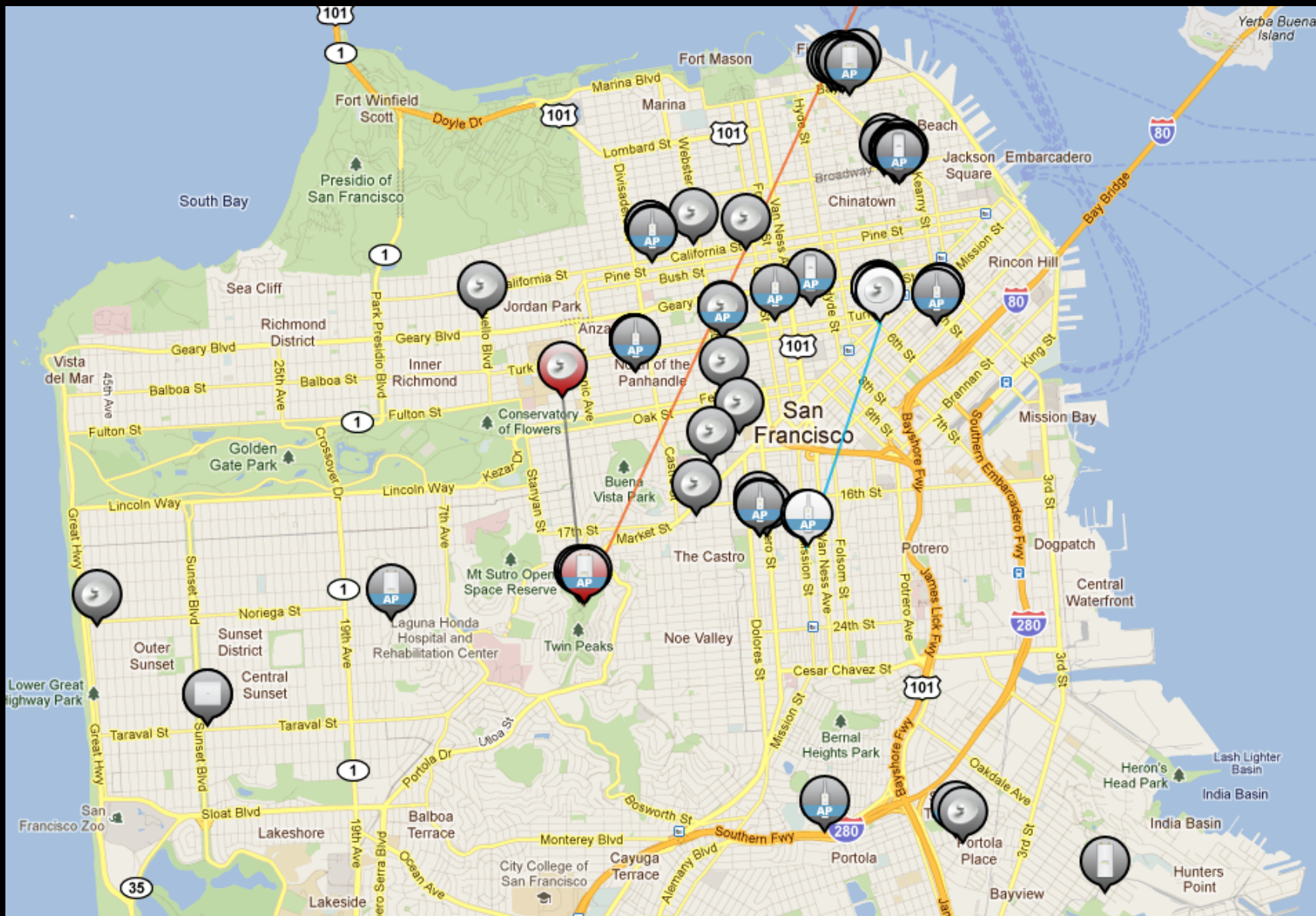
(oecd)

2011 just out: We are now 26th by speed
(nytimes/pando)

How about
Citywide Community Broadband?

San Francisco 2009-2011

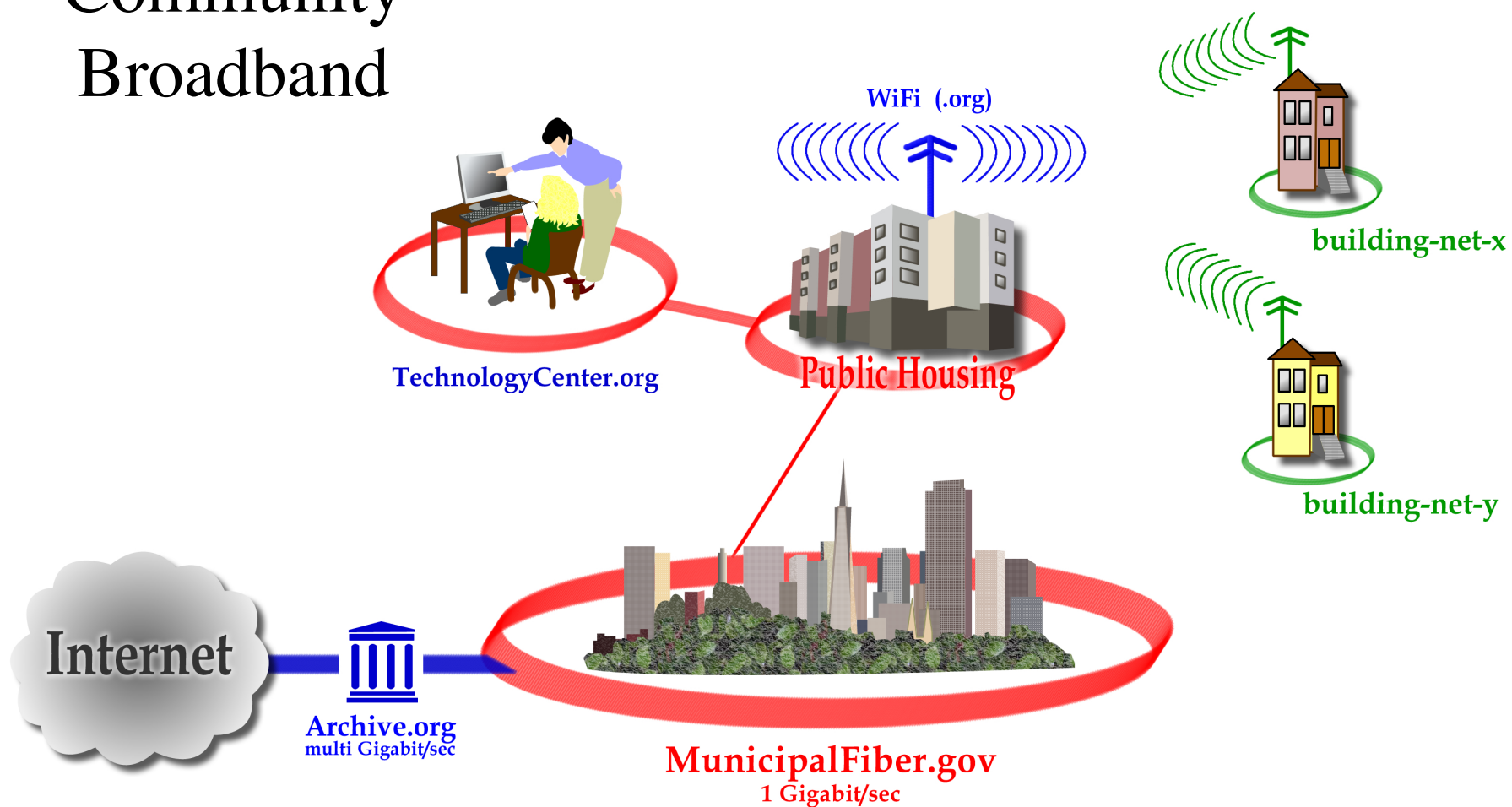
- Public-Public Partnership: City-Internet Archive
- Provides Internet to 7000+ households in public housing
- Fiber, 5.8 GHz backbone, 2.4 GHz access
- 400+ radios
- Last hop is “Crowd Sourced”
- City cost to connect household: \$40 one time!
- Internet Archive cost per household: \$2 per year



Typical Node



Community Broadband



Wanted: Next 2 Interested Cities

Internet Archive provides:

- Bandwidth
- Equipment
- Installation and training for first 5 sites

City provides:

- Access to municipal fiber or radio towers
- 50 rooftops
- University/CommCollege point-of-presence or similar
- Installation and physical maintenance

No money changes hands, no lawyerly agreements

Fast and Free

Can we help? Please contact
Ralf@archive.org

